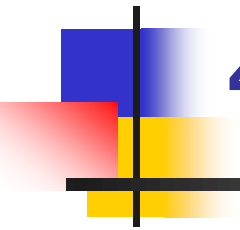


4 – 3 Transition Elements

Groups 3 – 12

- Most are found in ore.
- Some, like gold and silver, can be found pure.

Iron Triad

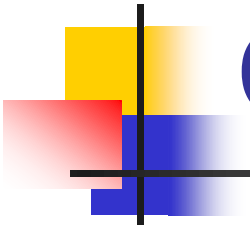
- Iron, Cobalt & Nickel
- Only elements that are magnetic
- Nickel is used in rechargeable batteries
- Iron is an important part of hemoglobin
- Iron is used to make steel

Tungsten

- W
- Has the highest melting point

Mercury

- Hg
- Has the lowest melting point
- Only metal that is liquid at room temperature



Chromium

- Cr
- Used to make colors more brilliant

Platinum Group

- Do not combine easily with other elements
- They are used as catalysts
- Catalyst – a substance that can make something happen faster but is not changed itself.

Inner Transition Elements

- Lanthanides & Actinides

Lanthanides

- Elements 58 – 71
- Were once called the “Rare Earth” metals
- Misch metal – alloy of lanthanides that make flints

Actinides

- Elements 90 – 103
- All actinides are radioactive
- Most are synthetic elements
- Synthetic Elements – elements made in laboratories and nuclear reactors
- Pu – fuel for nuclear power plants
- Am – home smoke detectors
- Cf(252) – kills some cancer cells

Dentistry & Orthodontics

- Amalgam – alloy of transition elements used for fillings in teeth
- There are new materials in use today
- Orthodontists are using wires with shape memory.